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Application of a mini-screw at the maxillary tubercle for treatment of maxillary protrusion

The use of a mini-implant in the maxillary tubercle for retraction of the upper arch in the treatment of maxillary protrusion is a topic that warrants discussion.

The authors review the anatomical conditions of the maxillary tuberosity region. They show that this site features scarce cortical bone and, occasionally, scarce bone space for mini-implant insertion due to the presence of third molars. It is therefore an unstable area for using this type of skeletal an-

chorage.

Although the literature supports the fact that mini-implants are seldom placed in this region, the authors were able to successfully treat an upper arch tooth retraction case with the support of a mini-implant installed in the maxillary tubercle.

Even in view of the authors' success it should be noted that this region is notorious for a high mini-implant failure rate and should not, therefore, be the treatment alternative of choice.

NAKAO, Noriko; KITAURA, Hideki; KOGA, Yoshiyuki; YOSHIDA, Noriaki. Application of a mini-screw at the maxillary tubercle for treatment of maxillary protrusion. **Orthod. Waves**, Tokyo, v. 67, p. 72-80, 2008.

Comparison of rate of canine retraction with conventional molar anchorage and titanium implant anchorage

Can skeletal anchorage really help to move teeth faster? This issue led the authors to undertake this study which compares a skeletal anchorage group with a conventional anchorage group in achieving canine retraction.

They recorded and compared the distances covered by canines in both cases, with the following results. The average distance canines covered each month in the skeletal anchorage group was 0.93 mm in the maxilla and 0.83 mm in the mandible. In the conventional anchorage group the distances were 0.81 mm in the maxilla and 0.76 in the

mandible. Therefore, they concluded that mini-implants shorten treatment time while making the procedure more accurate, unlike the conventional group, which undergoes some anchorage loss.

The study confirms what orthodontists routinely observe in their practice. Skeletal fixation – either with mini-implants or miniplates – is an essential tool in today's Orthodontic landscape thanks to its efficacy and decreased chair time. This is how the field of Orthodontics fulfils the expectations of patients who increasingly demand accuracy and speed from orthodontists.

THIRUVENKATACHARI, B.; AMMAYAPPAN, P.; KANDASWAMY, R. Comparison of rate of canine retraction with conventional molar anchorage and titanium implant anchorage. **Am. J. Orthod. Dentofacial Orthop.**, St. Louis, v. 134, no. 1, p. 30-35, 2008.

Use of a miniplate for skeletal anchorage in the treatment of a severely impacted mandibular second molar

Lower molar impaction is a common problem in dental practice. This article presents a clinical case involving an embedded and impacted lower second molar tooth whose position is challenging in three different aspects: Due to its depth, the presence of an impacted third lower molar tooth on top of the second molar and due to its position relative to the lower alveolar nerve, which crosses over the apical third of the tooth in question.

The treatment consisted in removing the third molar to allow access - through the alveolus - to the crown of the second molar, where a bracket was bonded, without causing serious damage to the adjacent structures, such as the alveolar nerve and the cortical bone. By installing a miniplate in the retromolar region, the tooth's traction was performed using ligature wire tying the miniplate to the bracket on the second molar. Six months later the tooth had erupted and the treatment

advanced into the alignment and levelling phase. The total treatment time was 2 years and 2 months.

The use of miniplates in the retromolar region should be well planned since the tissue in this area is very elastic and there is little viable space for insertion. Besides, access during surgery is difficult. It is also important to ensure that when teeth occlude the anchorage device does not interfere with adjacent teeth and tissues. Considering all aspects involved in the insertion of a miniplate, the use of skeletal anchorage has proved an excellent alternative in performing the traction of severely impacted teeth. Firstly, because it cancels the adverse effects of traditional orthodontic mechanics and promotes traction. Secondly, because it reduces the risk of damage to the lower alveolar nerve which, in this particular case, was directly related to the impacted molar.

TSENG, Y. C.; CHEN, C. M.; CHANG, H. P. Use of a miniplate for skeletal anchorage in the treatment of a severely impacted mandibular second molar. **Br. J. Oral Maxillofac. Surg.**, Churchill Livingstone, v. 46, no. 5, p. 406-407, 2008.

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